APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,392	01/12/2001	Keith A. Lowery	066241.0110	1634

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EXAMINER
WON, MICHAEL YOUNG

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		09/759,392	LOWERY ET AL.
		Examiner	Art Unit
		Michael Y Won	2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _12 January 2001_.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-45_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1-17,19-33 and 35-45_ is/are rejected.
7) ☒ Claim(s) _18 and 34_ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _1/12/01, 4/26/01, 7/24/02, 11/12/02, 4/17/03_.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-45 have been examined and are pending with this action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2.   Claims 1-11, 13, 19-27, 29, 30, 35-38, 40, 41, and 43-45 are rejected under 35

U.S.C. 102(a) as being anticipated by Barish et al., "World Wide Web Caching Trends

and Techniques", Communications Magazine, IEEE, Volume: 38, Issue: 5, May 2000,

Pages: 178-184.

INDEPENDENT:

As per claims 1, 22 and 44, Barish teaches a method and system comprising

means for community data caching comprising: a computer readable memory; an

application stored in the computer readable memory and operable to perform the

method of: intercepting a request for content at a cache module (see pg. 179: Fig.1

and col.1, 2nd paragraph: "A proxy cache server intercepts HTTP requests from

clients"); determining a cache share responsible for the request (see pg. 179: Fig.1;

col.1, 2nd paragraph: "and if it finds the requested object in its cache"; and col.2, 4th

paragraph: "redirecting them to Web caches servers or cache clusters"), the cache

share being associated with a cache community (see pg.178: Abstract and pg.179:

col.1, 3rd paragraph: "Proxy caches are usually deployed at the edges of a network (i.e.,

at company or institutional gateway or firewall hosts) so that they can serve a large

number of internal users."); determining whether the content associated with the

request is available at the cache share (see pg. 179: Fig.1 and col.1, 2nd paragraph:

"and if it finds the requested object in its cache"); retrieving the content associated with

the request from the cache share when the content associated with the request is

available at the cache share (see pg.178: col.1, 5th paragraph: "Cache hits eliminate the

need to contact the originating server"); and retrieving the content associated with the

request from an origin server when the content associated with the request is

unavailable at the cache share (see pg.179: col.1, 2nd paragraph: "If the object is not

found, the cache goes to the object's home server, the originating server, on behalf of

the user, gets the object") and storing the content associated with the request retrieved

from the origin server at the cache share (see pg.179: col.1, 2nd paragraph: "possibly

deposits it in its cache").

As per claims 38, 41, and 45, Barish teaches a method and a system comprising

means for community data caching comprising: a computer readable memory; an

application stored in the computer readable memory and operable to perform the

method of: intercepting a request for content at a cache module, the cache module

having an associated resource limit (inherent: all memory has limits); determining the

resource limit associated with the cache module in response to an incentive (see

pg.179: col.2, 4th paragraph: "This style of caching establishes a point at which different

kinds of administrative controls are possible"); determining a cache share responsible

for the request, the cache share being associated with a cache community; determining

whether the content associated with the request is available at the cache share;

retrieving the content associated with the request from the cache share when the

content associated with the request is available at the cache share; and retrieving the

content associated with the request from an origin server when the content associated

with the request is unavailable at the cache share and storing the content associated

with the request retrieved from the origin server at the cache share (see claim 1 and 22

rejection above for all preceding limitations not referenced).

DEPENDENT:

As per claims 2 and 23, Barish teaches of further comprising generating the

cache community, the cache community having a plurality of the cache shares (see

pg.179: Fig.1, (b) and (c) and pg.180: col.1, 'Adaptive Web Caching').

As per claims 3 and 24, Barish further teaches wherein generating the cache

community comprises: determining the plurality of cache shares (see pg.180: col.1, 4th

paragraph: "Adaptive caching consists of multiple distributed caches which dynamically

join and leave cache groups"); and associating a one of the cache shares with each of a

plurality of clients, the clients being associated with the cache community (see pg.178:

Abstract; pg.179: Fig.1 and col.1, 3rd paragraph: "Proxy caches are usually deployed at the edges of a network (i.e., at company or institutional gateway or firewall hosts) so that they can serve a large number of internal users.").

As per claims 4 and 25, Barish further teaches wherein determining the plurality of cache shares comprises determining a primary distribution of the requests, each cache share representing a portion of the requests (see pg.181: col.1 to col.2, 'Hierarchical Caching').

As per claim 5, Barish further teaches wherein determining the plurality of cache shares further comprises determining a secondary distribution of the requests (see pg.181: col.1 to col.2, 'Hierarchical Caching').

As per claim 6, Barish further teaches wherein the cache shares respectively comprise a plurality of Internet domain names starting with selected letters of the English alphabet (see pg.179: col.2: 2nd paragraph: "Reverse proxy caching is also a useful mechanism when supporting Web hosting farms (virtual domains mapped to a single physical site)").

As per claims 7, Barish further teaches wherein each cache share respectively comprises a plurality of Internet domain names (see pg.180, col.1, 6th paragraph: "This technique relies on multicast communication between cache group members and makes use of URL tables to intelligently determine to which overlapping meshes requests should be forwarded.").

As per claims 8 and 26, Barish further teaches wherein each cache share respectively comprises a set of Internet domain names (see pg.179: col.2: 2nd paragraph: "Reverse proxy caching is also a useful mechanism when supporting Web hosting farms (virtual domains mapped to a single physical site)").

As per claims 9 and 27, Barish further teaches wherein each cache share respectively comprises a plurality of content items associated with requests to be cached at a particular client associated with the cache community (see pg.180, col.1, 4th paragraph: "Adaptive caching consists of multiple distributed caches which dynamically join and leave cache groups (referred to as cache meshes) based on content demand").

As per claims 10 and 29, Barish teaches of further comprising generating the request at a first client associated with the cache community, the cache community comprising the first client and a plurality of second clients distinct from the first client (see pg.179, Fig.1).

As per claims 11 and 30, Barish further teaches wherein determining a cache share responsible for the request comprises: comparing the request to a location table associated with the cache module, the location table associating each cache share with a cache location, each cache location comprising a selected one of the second clients; and determining which location is associated with the request in response to the comparison (see pg.180, col.1, 6th paragraph: "This technique relies on multicast

communication between cache group members and makes use of URL tables to intelligently determine to which overlapping meshes requests should be forwarded.").

As per claim 13, teaches of further comprising determining a resource limit associated with the cache module (see pg.179: col.2, 4th paragraph: "This style of caching establishes a point at which different kinds of administrative controls are possible").

As per claims 19 and 35, Barish teaches of further comprising determining whether the origin server is unable to provide the content associated with the request; attempting to retrieve the content associated with the request from the origin server until the origin server is able to provide the content associated with the request; and retrieving content associated with request when the server is able to provide the content associated with the request.

As per claims 20 and 36, Barish further teaches wherein determining whether the origin server unable provide the content comprises determining whether the origin server is busy.

As per claims 21 and 37, Barish further teaches wherein attempting retrieve content is performed in the background (see pg.178: col.2, 2nd and 3rd paragraphs: "Caching can improve user perceptions about network performance in two ways. First, when serving clients locally, caches hide wide area network latencies. ... Second, temporary unavailability of the network can be hidden from the user, thus making the network appear to be more reliable").

As per claims 40 and 43, Barish further teaches wherein the incentive comprises

financial incentive (implicit: by determining the resource limit and maintaining the

resource limit such that additional cache modules are not necessary results in a

financial incentive (i.e., money not spent on additional cache modules)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 12, 14, 28, 39, and 42 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Barish et al., "World Wide Web Caching Trends and Techniques",

Communications Magazine, IEEE, Volume: 38, Issue: 5, May 2000, Pages: 178-184 in

view of Wang (US 6,112,279 A).

As per claims 12 and 28, Barish does not explicitly teach of further comprising

collecting statistical information at the cache module, the statistical information being

associated with a client associated with the cache module. Wang teaches of collecting

statistical information at the cache module, the statistical information being associated

with a client associated with the cache module (see col.5, lines 36-38 and col.7, lines

33-41). It would have been obvious to a person of ordinary skill in the art at the time

the invention was made to employ the teachings of Wang within the systems taught by

Barish by implementing collecting statistical information at the cache module within the

community data caching method and system because Wang teaches that such an

implementation allows for load balancing among the plurality of caches (see col.5, lines

43-46).

As per claims 14, 39, and 42, Barish does not explicitly teaches wherein the

resource limit comprises a percentage of resource associated with a client associated

with the cache module and wherein the resource comprises any item selected from the

group consisting essentially of processor time, bandwidth, storage space and memory

associated with the client. Wang teaches of resource limit comprising a percentage of

resource associated with a client associated with the cache module and wherein the

resource comprises any item selected from the group consisting essentially of processor

time, bandwidth, storage space and memory associated with the client (see col.4, lines

55-58 and col.7, lines 31-36). It would have been obvious to a person of ordinary skill

in the art at the time the invention was made to employ the teachings of Wang within

the systems taught by Barish by implementing a resource limit comprising a percentage

of resource associated with a client associated with the cache module and wherein the

resource comprises storage space and memory associated with the client within the

community data caching method and system because Wang teaches that this allows

other caches "to pick up the assignment" (see col.7, lines 40-43).

4.   Claims 15-17 and 31-33 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Barish et al., "World Wide Web Caching Trends and Techniques",

Communications Magazine, IEEE, Volume: 38, Issue: 5, May 2000, Pages: 178-184 in

view of Major (US 6,542,967 B1).

As per claims 15, 16, 31, and 32, Barish does not explicitly teaches of further

comprising storing content marked as cacheable at the cache module and storing

content unless the content is marked as non-cacheable at the cache module. Major

teaches of storing content marked as cacheable at the cache module and storing

content unless the content is marked as non-cacheable at the cache module (see col.7,

lines 19-24). It would have been obvious to a person of ordinary skill in the art at the

time the invention was made to employ the teachings of Major within the systems

taught by Barish by implementing storing content marked as cacheable at the cache

module and storing content unless the content is marked as non-cacheable at the cache

module within the community data caching method and system because such an

implementation would save processing time by not attempting to save the content and

also save memory.

As per claims 17 and 33, Barish teaches of further comprising expiring content

stored at the cache module using a content expiration protocol (see pg.178: col.2, 4th

paragraph: "if an object is cached, is the user guaranteed that the cached copy is up-

to-date with the version on the originating server" and pg.183, col.1 to col.2: 'Cache

Consistency Methods').

Allowable Subject Matter

5.   Claims 18 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

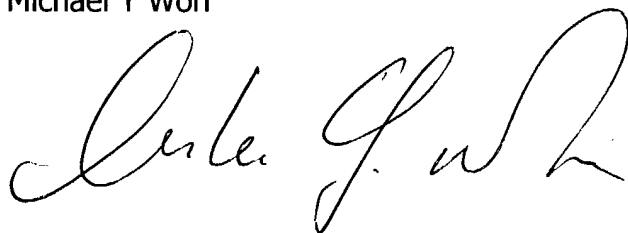The following is a statement of reasons for the indication of allowable subject matter:

Prior art of records Barish et al. and Major, do not disclose, teach, or suggest the claim limitation of further wherein the content expiration protocol comprises the Internet Cache Synchronization Protocol.

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Y Won whose telephone number is 703-605-4241. The examiner can normally be reached on M-Th: 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T Alam can be reached on 703-308-6662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Michael Y Won

July 27, 2004

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER